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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/912,082	07/24/2001	Yoshinori Muramatsu	204936-9001	5520

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Michael Best & Friedrich LLC
401 North Michigan Avenue
Chicago, IL 60611

EXAMINER

STREGE, JOHN B

ART UNIT	PAPER NUMBER
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2625

DATE MAILED: 07/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/912,082

Applicant(s)

MURAMATSU ET AL.

Examiner

John B Strege

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4,6.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Examiner's Comment

1. Claim 4 line 4 should include the word "having" after image sensor to make "image sensor having sensitivity..."

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 4-7, 9, and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 4 discloses "an image processing section, which performs image processing of data obtained from said image processing section". This appears to be an error since according to the specification the image processing section obtains data from the imaging section. For examining purposes the Examiner will consider that the image processing section receives data from the imaging section.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-3, and 8 is rejected under 35 U.S.C. 102(e) as being anticipated by Holehan USPN 6,337,918.

Claim 1 discloses, "a fingerprint authentication apparatus comprising: a imaging section for obtaining an image of an object to be fingerprint authenticated, using an optical image sensor having infrared sensitivity; an image processing section, which performs image processing of data obtained from said imaging section and obtaining a fingerprint image; and a fingerprint comparison section, which performs a comparison between said fingerprint image and a priorly stored fingerprint image."

As seen in figure 2 Holehan discloses an infrared fingerprint security system with a touch pad 16 (corresponding to the claimed imaging section) that has an infrared detector 24. A touch pad controller 56 (figure 3) processes the inputted infrared information and produces signals indicative of the user's finger tip, which is used to do a fingerprint analysis (col. 4 lines 31-40). The fingerprint information is transmitted by the touch pad controller 56 to a controller 42 which can access a fingerprint database memory 46 in order to compare the information inputted by the user to information stored in memory (col. 5 lines 15-24).

Regarding claim 2, Holehan discloses that the infrared detector may be implemented by a charge-coupled device (col. 3 lines 46-54).

Regarding claim 3, Holehan discloses infrared sources 20 (col. 3 line 46) that shine light onto the fingerprint.

Regarding claim 8, the finger is brought into contact with the imaging section as seen in figure 2.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Holehan USPN 6,337,918 in view of Fujimoto et al. USPN 5,177,802 (hereinafter "Fujimoto").

Claim 10 discloses the apparatus according to claim 1 wherein a fingerprint image is obtained with said object not in contact with said imaging section.

As discussed, Holehan discloses the limitations of claim 1. Holehan does not explicitly disclose obtaining an image of a fingerprint that is not in contact with the imaging section.

Fujimoto discloses when using a glass plate for obtaining an image of a fingerprint (as Holehan does) that a residual fingerprint may be left on the plate which brings about noise light (col. 2 lines 5-29). To remedy this problem Fujimoto discloses a fingerprint input apparatus that is capable of directly imaging fingerprints without making contact with the finger (col. 4 lines 7-14)(as seen at least in figure 8.

Holehan and Fujimoto are analogous art because they are from the same field of endeavor of authentication using fingerprints.

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify Holehan with Fujimoto to obtain a fingerprint without a finger having to make direct contact with the imaging device. The motivation for doing so would be to avoid the noise that results from residual fingerprints. Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to combine Holehan and Fujimoto to obtain the invention as specified in claim 10.

8. Claims 4, 7,9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lapsley et al. USPN 5,737,439 (hereinafter "Lapsley").

Lapsley discloses an anti-fraud biometric scanner to determine if the sample obtained is that of a live human (col. 1 lines 4-7). As seen in figure 4 an infrared light source 206 and an LED in the visible light range 202 are used to illuminate a finger 201. A photodetector 203 that is sensitive to light at the first and second light sources converts the light to an electrical signal (col. 5 lines 51-55). These components are in turn attached to or integral with a conventional biometric scanner that is not shown in figure 4 (col. 5 lines 57-59). The biometric scanner is used to obtain the fingerprint image. Lapsley further discloses that the photodetector may be replaced by image conversion means such as a CCD or CMOS image array (col. 7 lines 51-57).

Lapsley does not explicitly disclose a fingerprint comparison section, which performs a comparison between the fingerprint image and a priorly stored fingerprint

image since Lapsley is concerned principally with determining if the finger is fake. However in the background it is apparent that the system may be used for authentication purposes such as to authenticate transactions (col. 1 lines 20-21). It is well known in authentication systems to compare a fingerprint to a stored fingerprint for authentication purposes and therefore the Examiner declares official notice. The motivation for comparing the fingerprint to another fingerprint would be to authenticate that the user is authorized to enter the system after it has determined that the user is not trying to use a fake finger. Therefore it would have been obvious to one of ordinary skill in the art to use Lapsley's invention to obtain a fingerprint and then carry out further processing to compare the fingerprint with a registered user.

Allowable Subject Matter

9. Claims 5-6, 11 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Brownlee USPN 6,292,576, Method and Apparatus for distinguishing a human finger from a reproduction of a fingerprint.

Black USPN 6,307,956, Writing implement for identity verification system
Dowling, Jr. et al. USPN 4,785,171, Fingerprint Acquisition system with a fiber optic block.


Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John B Strege whose telephone number is (703) 305-8679. The examiner can normally be reached on Monday-Friday 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on (703) 308-5246. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JS


BHAVESH M. MEHTA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600